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PROPERTIES OF 91 SOUTHERN SOIL SERIES

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From June 1954 to July 1955 the Vicksburg Infiltration Project^{1/} collected and analyzed samples of 91 soil series in 7 southern states. The purpose was to supply the U. S. Army with information needed for specialized research on military trafficability, but the basic data on soil properties should be of interest to soil scientists generally. The 91 series may be considered typical of the soils in the Gulf Coastal Plain and the Lower Mississippi Valley. Samples were taken at 176 sites, and standard methods were used throughout the study for both field and laboratory procedures.

The soil series are listed alphabetically in Table 1. They were identified in all cases by regional soil correlators of the Soil Conservation Service. The general locations of the sites are shown in figure 1, in which each dot represents a weather station. One to five sites were located within 5 miles of each of these stations.^{2/}

Tables 2 to 8 (one table for each State) characterize the individual sample sites and summarize the information on soil properties.

In these tables, "vegetation and land use" refers to the cover type on the site and to any disturbance caused by man—cultivation, grazing, or the cutting of hay. Where none of these disturbances had occurred within 5 years, the site was classed as undisturbed.

No sites were established on recently logged areas or on land in cultivation in 1953-54. Areas that had been cultivated sometime within the five years preceding the survey were classed as cultivated previously—now grazed if they were being currently grazed by livestock; and as cultivated previously—now in hay if the cover was being cut for hay.

1/ Maintained at Vicksburg, Mississippi, cooperatively by the Southern Forest Experiment Station, Forest Service, U. S. Department of Agriculture, and the Waterways Experiment Station, Corps of Engineers, U.S. Army. Special acknowledgment is due Messrs. Irving Martin, Allen Hasty, and Marvin Lawson of the Soil Survey Office, Soil Conservation Service, Knoxville, Tennessee, for identifying the soils of this region.

2/ As will be apparent from the information under "Weather station and county," in tables 2 to 8, the station and the sampling site were not always in the same county.

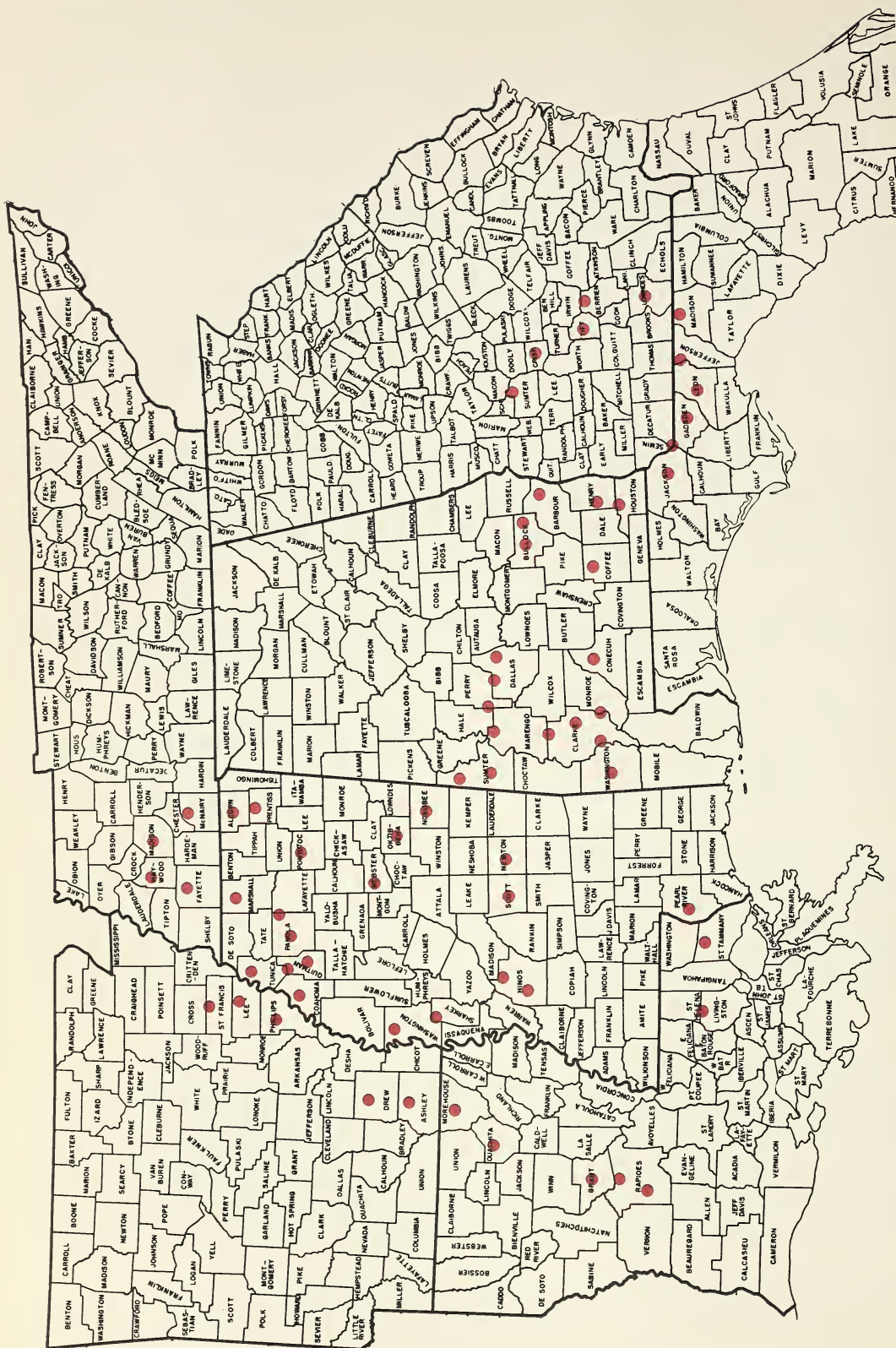


Table 1.—Soil series studied

Series	State	Series	State
Alligator	Mississippi	Lakeland	Florida
Barth	Florida	Leeper	Mississippi
Bibb	Alabama	Leon	Florida
Boswell	Alabama	Lexington	Arkansas
	Arkansas		Mississippi
Bowie	Louisiana		Tennessee
Brooksville	Mississippi	Lintonia	Arkansas
Byars	Alabama		Tennessee
	Georgia	Loring	Arkansas
Caddo	Louisiana		Mississippi
Cahaba	Alabama	Lynchburg	Alabama
Calhoun	Arkansas		Georgia
	Louisiana	Magnolia	Alabama
	Mississippi		Georgia
Calloway	Mississippi	Mantachie	Alabama
Carroll	Mississippi		Mississippi
	Tennessee	Memphis	Mississippi
Catalpa	Alabama		Tennessee
Clack	Arkansas	Norfolk	Alabama
Collins (See Falaya-Collins)	Mississippi	Ochlockonee	Florida
Commerce	Mississippi		Louisiana
Congaree	Florida	Oktibbeha	Mississippi
Cuthbert	Alabama	Olivier	Louisiana
Dowling	Mississippi		Mississippi
Dubbs	Mississippi		Tennessee
Dulac	Arkansas	Ora	Alabama
Dundee	Mississippi	Orangeburg	Alabama
Ecu	Mississippi		Louisiana
Eustis (See Orangeburg-Eustis)	Alabama	Orangeburg-Eustis	Alabama
Eutaw	Alabama	Pheba	Alabama
	Mississippi	Plummer	Florida
Faceville	Florida	Prentiss	Mississippi
Falaya	Mississippi	Rains	Alabama
Falaya-Collins	Mississippi		Georgia
Falkner	Mississippi	Red Bay	Alabama
Flint	Alabama		Florida
Forestdale	Arkansas	Richland	Louisiana
	Mississippi	Ruston	Alabama
Franklinton	Mississippi		Louisiana
Geiger	Alabama	Sawyer	Alabama
	Mississippi		Mississippi
Goldsboro	Georgia	Savannah	Louisiana
Grady	Florida		Mississippi
	Georgia	Sharkey	Mississippi
Greenville	Alabama	Shubuta	Mississippi
	Georgia	Stough	Alabama
Grenada	Arkansas	Sumter	Alabama
	Mississippi	Susquehanna	Alabama
	Tennessee		Mississippi
Henderson	Georgia	Thompson	Louisiana
Henry	Mississippi	Tifton	Georgia
Huckabee	Alabama	Tilden	Mississippi
Hunt	Mississippi	Tunica	Mississippi
Hymon	Mississippi	Vaiden	Mississippi
Independence	Tennessee	Vian	Louisiana
Irvington	Georgia	Vaclude	Florida
Iuka	Alabama	Waverly	Arkansas
Jonesville	Georgia		Mississippi
Kaufman	Mississippi		Tennessee
Kershaw	Alabama	Wrightsville	Louisiana
Klej	Florida	Yahola	Louisiana
Lafe	Arkansas	Stratified	
Lakeland	Alabama	Clays & Muck	Alabama

Areas that had not been cultivated for 5 years were classed as lightly grazed if they showed some animal use; as moderately grazed if they were being intensively managed for concentrated grazing; as hay if they revealed no grazing but the cover was cut for hay; and as lawn if they were mowed frequently.

The soil properties were determined from bulk samples and 2-inch cores taken randomly from a 12 by 18-foot plot at each site. Bulk samples, composited from six locations, were taken from the 0 to 6-, 6 to 12-, and the 12 to 18-inch layers for determination of mechanical analysis, plasticity constants, and organic-matter content. No samples were taken below 18 inches.

Texture class follows the terminology given in the U. S. Department of Agriculture Soil Survey Manual, p. 210.^{3/} The following symbols are used, alone or in combination:

S = sand

Si = silt

C = clay

L = loam

The mechanical composition was determined at the Mississippi Agricultural Experiment Station by a combination sieve and hydrometer method. The separation of medium from fine-sized particles was based on Bouyoucos hydrometer readings taken only one hour after the suspension was mixed and adjusted to a pH of 9.5 with 0.01N sodium hydroxide. The figures for fine-particle content may thus include a portion of the particles usually classified as fine silt. However, in the tables the medium and fine-sized particles are reported as silt and clay, respectively. The figures are expressed in the table as percent of dry weight.

Organic-matter determinations were made by a modified Walkley rapid-dichromate oxidation method^{4/} at the Mississippi Agricultural

^{3/} Soil Survey Staff, U. S. Bureau of Plant Industry, Soils, and Agricultural Engineering.

Soil survey manual. U. S. Dept. Agr. Handbook 18, 503 pp., illus. 1951.

^{4/} Peech, M., Alexander, L. T., Dean, L. A., and Reed, J. F.

Methods of soil analysis for soil-fertility investigations.
U. S. Dept. Agr. Cir. 757, 25 pp. 1947.

Experiment Station and are expressed as percent of dry weight. The loss-on-ignition method, following modified procedures of the Association of Official Agricultural Chemists,^{5/} was used for samples when the organic-matter content was determined as over 5 percent by the Walkley method.

The plasticity constants of the 6 to 12-inch layer were determined by the Soils Laboratory of the Waterways Experiment Station.^{6/} The figures are expressed as moisture content in percent of dry weight.

Bulk density and tension analysis were determined from 2-inch cores obtained with the modified San Dimas or drive-type sampler^{7/} when the soil was moist. Cores were taken in duplicate at the 0 to 3-inch, 3 to 6-inch, 6 to 9-inch and 9 to 12-inch depths and averaged in the table by 6-inch layers. The moisture held by the soil at zero tension (saturation) was determined by weighing the 2-inch cores after they had been soaked in a pan of water. As some water was lost during transfer, and as all pores are usually not filled by this method, these values are frequently less than the theoretical maximum. The 60-cm. values were determined by use of a tension table.^{8/} The tension values are expressed in percent of dry weight.

^{5/} Association of Official Agricultural Chemists.

Methods of analysis. Ed. 6, 932 pp., illus. Washington, D. C. 1945.

^{6/} Waterways Experiment Station.

Soils Laboratory manual—Lower Mississippi Valley Division.

Section 111, mechanical analysis. U. S. Army, Waterways Experiment Station, 16 pp., illus. 1951.

^{7/} Broadfoot, W. M.

Procedures and equipment for determining soil bulk density.

U. S. Forest Service, Southern Forest Expt. Sta. Occas. Paper 135, pp. 2-11, illus. 1954.

^{8/} Leamer, R. W., and Shaw, B.

A simple apparatus for measuring non-capillary porosity on an extensive scale. Jour. Amer. Soc. Agron. 33:1003. 1941.

Table 2. Alabama soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Shrinkage index		Saturation	Atmosphere tension
Bibb	314	Evergreen, Conecuh	Grasses, moderately grazed	Bottom level	0-6 6-12 12-18	SL SL LS	54 70 80	32 20 13	14 10 7	4.57 1.35 .46	Non-plastic			1.26 1.53	37.9 23.1	30.7 18.1
Bibb	354	Union Springs, Bullock	Grasses, moderately grazed	Bottom 3 per-cent	0-6 6-12 12-18	LS LS LS	84 85 76	14 13 20	2 2 4	1.05 .55 .55	Non-plastic			1.49 1.47	26.0 26.3	23.2 23.0
Bibb	368	Cuba, Sumter	Hardwood, undisturbed	Bottom level	0-6 6-12 12-18	L L CL	27 42 38	47 33 32	26 25 30	3.77 .86 .55	26	16	10	1.34 1.50	34.3 25.6	31.4 24.3
Boswell	353	Union Springs, Bullock	Pine, undisturbed	Upland 15 per-cent	0-6 6-12 12-18	LS SC C	79 52 42	14 10 11	7 38 47	1.15 .86 .55	39	18	21	1.23 1.36	42.4 36.5	32.7 35.2
Byars	355	Selma, Dallas	Pine, undisturbed	Terrace level	0-6 6-12 12-18	L SL SL	52 58 60	34 32 31	14 10 9	3.27 1.25 .70	Non-plastic			1.50 1.52	26.6 24.4	19.2 16.6
Byars	366	Livingston, Sumter	Pine-sweet gum, undisturbed	Terrace 3 per-cent	0-6 6-12 12-18	SCL CL CL	47 38 38	23 23 24	30 39 38	1.45 .78 .55	40	19	21	1.46 1.49	27.5 28.5	24.9 27.6
Cahaba	310	Claiborne, Monroe	Grasses, moderately grazed	Terrace 4 per-cent	0-6 6-12 12-18	LS SL SL	79 70 68	17 20 16	4 10 16	.95 .55 .38	Non-plastic			1.41 1.53	30.9 23.2	18.4 16.0
Catalpa	360	Marion Junction, Dallas	Grasses, moderately grazed	Bottom level	0-6 6-12 12-18	SiC SiC C	2 1 7	48 44 33	50 55 60	3.13 2.35 1.25	63	27	36	1.37 1.28	34.0 40.7	32.3 40.2
Cuthbert	301	Chatom, Washington	Pine-oak, undisturbed	Upland 15 per-cent	0-6 6-12 12-18	SL L CL	61 43 43	29 31 23	10 26 34	1.05 .62 .46	26	15	11	1.55 1.61	26.0 20.9	16.2 16.5
Cuthbert	350	Midway, Bullock	Pine, undisturbed	Upland 8 per-cent	0-6 6-12 12-18	SL C SC	72 40 49	13 13 13	15 47 38	1.33 .86 .46	49	23	26	1.45 1.27	29.4 41.7	18.7 39.8
Cuthbert	369	Cuba, Sumter	Pine, undisturbed	Upland 10 per-cent	0-6 6-12 12-18	SL SCL SCL	71 53 46	21 24 22	8 23 32	.95 .62 .38	31	15	16	1.51 1.64	24.3 21.2	18.0 20.0
Eutaw	364	Demopolis, Marengo	Hardwood, undisturbed	Upland level	0-6 6-12 12-18	SiCL SiC SiC	17 15 15	49 45 43	34 40 42	2.23 .55 .32	49	20	29	1.40 1.48	31.6 29.5	29.8 29.0
Flint	356	Selma, Dallas	Grasses-weeds, lightly grazed	Terrace level	0-6 6-12 12-18	SL SL SL	68 65 59	25 25 25	7 10 16	.62 .32 .32	Non-plastic			1.42 1.43	29.6 29.4	23.4 22.8
Geiger	357	Selma, Dallas	Grasses, moderately grazed	Terrace level	0-6 6-12 12-18	SC L CL	47 43 35	13 34 29	40 23 36	3.13 1.25 .70	45	20	25	1.46 1.43	30.7 30.0	24.2 22.4
Greenville	306	Jackson, Clarke	Grasses, moderately grazed	Upland 5 per-cent	0-6 6-12 12-18	SL CL CL	55 35 35	29 29 31	16 36 34	1.05 .70 .46	33	13	20	1.57 1.56	24.2 23.4	17.4 20.1
Huckabee	365	Livingston, Sumter	Grasses, moderately grazed	Terrace level	0-6 6-12 12-18	SL SL LS	80 75 78	10 10 17	10 15 5	1.15 .95 .38	Non-plastic			1.48 1.56	26.6 23.4	16.4 15.4
Iuka	304	Jackson, Washington	Grasses, moderately grazed	Bottom level	0-6 6-12 12-18	SiCL SiCL SiC	9 10 3	57 56 52	34 34 45	2.75 1.25 1.25	44	23	21	1.40 1.48	30.5 29.5	26.9 27.7
Kershaw	305	Jackson, Clarke	Hardwood, undisturbed	Upland 6 per-cent	0-6 6-12 12-18	LS S S	79 92 87	17 6 9	4 2 4	1.05 .78 .55	Non-plastic			1.36 1.53	32.1 24.1	11.6 8.2
Lakeland	348	Eufaula, Barbour	Grasses-weeds, undisturbed	Upland level	0-6 6-12 12-18	LS LS LS	83 81 83	14 14 13	3 5 4	.78 .70 .25	Non-plastic			1.41 1.44	31.0 29.3	25.1 22.9
Lynchburg	303	Chatom, Washington	Pine, undisturbed	Upland 5 per-cent	0-6 6-12 12-18	SL SL SL	62 62 53	30 28 27	8 10 20	4.52 1.05 .55	Non-plastic			1.34 1.71	31.1 19.9	26.7 16.7

(Continued)

Table 2. Alabama soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topo-graphic position and slope	Depths sam-pled inches	Text-ure class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liq- uid limit	Plas- tic limit	Plas- ticity index		Satu- ration	At- mosphere tension
Magnolia	307	Thomasville, Clarke	Pine, undisturbed	Upland 12 per- cent	0-6 6-12 12-18	SL SCL SC	75 51 46	19 19 14	6 30 40	1.25 .95 .62	Non-plastic			1.39 1.52	25.4 24.4	15.8 16.9
Mantachie	351	Midway, Bullock	Grasses- weeds, undisturbed	Bottom level	0-6 6-12 12-18	SL SL SL	74 54 57	18 27 25	8 19 18	1.25 .86 .62	Non-plastic			1.47 1.45	26.8 28.6	21.6 23.1
Norfolk	313	Evergreen, Conecuh	Pine-oak, undisturbed	Upland 15 per- cent	0-6 6-12 12-18	LS LS SL	79 77 72	15 19 20	6 4 8	1.45 .46 .25	Non-plastic			1.49 1.71	28.5 19.7	18.6 12.9
Norfolk	316	Headland, Henry	Grasses, lawn	Upland level	0-6 6-12 12-18	SL SL SL	74 70 62	16 14 18	10 16 20	2.08 .70 .38	Non-plastic			1.68 1.84	20.5 15.6	15.6 13.8
Norfolk	317	Headland, Henry	Grasses, moderately grazed	Upland level	0-6 6-12 12-18	LS SL SL	82 76 77	12 14 14	6 10 9	1.15 .46 .38	Non-plastic			1.60 1.70	20.3 17.6	12.0 10.9
Norfolk	320	Dothan, Houston	Pine, grasses and weeds, undisturbed	Upland level	0-6 6-12 12-18	SL SL SCL	66 67 64	20 14 10	14 19 26	2.08 .78 .32	Non-plastic			1.58 1.74	22.8 18.4	14.6 14.5
Ora	311	Claiborne, Monroe	Grasses and weeds, undisturbed	Upland level	0-6 6-12 12-18	SL SCL	66 56 54	28 24 24	6 20 22	1.25 .70 .46	24	12	12	1.65 1.57	20.6 22.5	13.1 15.8
Orangeburg	309	Whatley, Clarke	Pine, undisturbed	Upland 20 per- cent	0-6 6-12 12-18	LS SL SCL	80 63 65	16 29 15	4 8 20	2.35 .95 .78	Non-plastic			1.57 1.73	24.6 20.7	11.9 12.2
Orangeburg- and Eustis	315	Elba, Coffee	Grasses- weeds, undisturbed	Upland 20 per- cent	0-6 6-12 12-18	LS LS LS	85 82 80	11 13 12	4 5 8	.86 .46 .32	Non-plastic			1.48 1.62	28.5 21.1	11.6 9.3
Pheba	367	Livingston, Sumter	Pine, undisturbed	Upland 4 per- cent	0-6 6-12 12-18	SL SL SL	64 57 54	30 33 35	6 10 11	1.65 .38 .32	12	14	-2	1.56 1.62	22.0 21.1	17.7 17.4
Rains	302	Chatom, Washington	Pine-oak, undisturbed	Upland level	0-6 6-12 12-18	SL SL SL	58 55 55	34 35 33	8 10 12	2.60 .78 .70	Non-plastic			1.43 1.58	25.9 22.2	20.1 19.6
Red Bay	312	Evergreen, Conecuh	Grasses, moderately grazed	Upland 5 per- cent	0-6 6-12 12-18	SCL SCL SCL	65 63 59	7 17 19	28 20 22	.78 .46 .32	21	11	10	1.50 1.36	26.4 31.6	17.2 19.1
Ruston	318	Headland, Henry	Grasses- weeds, undisturbed	Upland 8 per- cent	0-6 6-12 12-18	SL SL SL	71 74 72	18 12 14	11 14 14	2.08 .70 .38	Non-plastic			1.46 1.71	25.5 17.5	15.0 12.4
Ruston	349	Eufaula, Barbour	Pine, undisturbed	Upland 8 per- cent	0-6 6-12 12-18	SL SL SCL	78 73 64	15 11 12	7 16 24	1.98 .86 .70	Non-plastic			1.42 1.56	30.6 23.6	20.3 18.0
Sawyer	308	Thomasville, Clarke	Pine, undisturbed	Upland 5 per- cent	0-6 6-12 12-18	LS LS LS	80 80 76	16 16 20	4 4 4	1.88 .70 .46	Non-plastic			1.36 1.51	31.5 27.1	17.8 15.6
Stough	358	Marion Junction, Dallas	Pine, undisturbed	Terrace level	0-6 6-12 12-18	SL SL SL	52 69 64	39 17 22	9 14 14	3.13 .38 .38	Non-plastic			1.57 1.68	20.6 17.7	16.8 12.8
Sumter	359	Marion Junction, Dallas	Grasses, moderately grazed	Upland 6 per- cent	0-6 6-12 12-18	C C C	13 8 9	31 25 29	56 67 62	3.62 1.32 .86	51	24	27	1.36 1.50	34.9 29.6	32.6 28.8
Sumter	361	Uniontown, Marengo	Grasses, moderately grazed	Upland 8 per- cent	0-6 6-12 12-18	C C C	12 13 10	34 31 34	54 56 56	1.25 .70 .70	60	22	38	1.42 1.46	31.6 31.2	30.4 30.7
Sumter	362	Demopolis, Marengo	Grasses, moderately grazed	Upland 3 per- cent	0-6 6-12 12-18	SiC SiC C	13 14 13	47 46 37	40 40 50	2.35 1.45 .95	58	26	32	1.40 1.38	30.6 34.8	28.3 34.3
Susquehanna	352	Union Springs, Bullock	Pine, undisturbed	Upland 6 per- cent	0-6 6-12 12-18	SCL C C	72 41 43	7 14 17	21 45 40	1.88 .55 .38	57	28	29	1.37 1.34	33.6 38.0	30.4 36.7
Stratified Clays and Muck	319	Dothan, Houston	Cypress, undisturbed	Bottom level	0-6 6-12 12-18	SiC C C	3 3 24	43 34 35	54 63 41	7.45 11.33 5.80	61	38	23	1.00 1.00	58.3 56.6	48.2 52.8

Table 3. Arkansas soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	Atmosphere tension
Boswell	125	Monticello, Drew	Pine-oak, undisturbed	Upland 8 per cent	0-6	L	42	35	23	2.35				1.19	42.3	37.3
					6-12	C	15	35	50	.70	61	30	31	1.21	47.8	46.8
					12-18	C	11	37	52	.55						
Calhoun	121	Marvell, Phillips	Grasses, moderately grazed	Terrace level	0-6	Si	2	86	12	.78				1.45	29.6	26.9
					6-12	SiL	2	82	16	.46	Non-plastic			1.49	26.7	24.0
					12-18	SiL	2	76	22	.46						
Clack	119	Marianna, Lee	Grasses, lawn	Terrace level	0-6	L	47	40	13	1.05				1.51	25.3	19.1
					6-12	SL	70	20	10	.55	Non-plastic			1.56	22.3	14.2
					12-18	SL	71	19	10	.38						
Dulac	124	Monticello, Drew	Grasses-weeds, undisturbed	Upland 4 per cent	0-6	SiL	26	61	13	1.65				1.45	27.3	24.4
					6-12	SiL	25	55	20	.70	26	18	8	1.49	26.3	24.4
					12-18	SiL	22	53	25	.46						
Forestdale	120	Marianna, Lee	Grasses, moderately grazed	Terrace level	0-6	SiCL	18	52	30	2.23				1.39	31.9	28.8
					6-12	L	46	38	16	1.65	27	18	9	1.59	22.7	18.8
					12-18	SL	64	29	7	.46						
Grenada	116	Forrest City, St. Francis	Hardwood, undisturbed	Upland 3 per cent	0-6	SiCL	2	70	28	.38				1.56	26.8	25.5
					6-12	SiCL	1	67	32	.25	37	22	15	1.54	28.1	26.8
					12-18	SiCL	1	69	30	.25						
Lafe	127	Crossett, Ashley	Grasses-weeds, lightly grazed	Terrace level	0-6	SiL	28	67	5	.70				1.57	21.6	19.9
					6-12	SiL	30	60	10	.38	Non-plastic			1.56	22.2	19.0
					12-18	SiL	26	62	12	.32						
Lexington	126	Crossett, Ashley	Pine, undisturbed	Upland level	0-6	SiL	31	58	11	1.33				1.51	24.8	22.5
					6-12	SiL	22	60	18	.38	24	17	7	1.60	22.3	20.8
					12-18	SiL	19	56	25	.32						
Lexington	129	Crossett, Ashley	Pine, undisturbed	Upland 3 per cent	0-6	SiL	32	57	11	.62				1.52	25.4	21.7
					6-12	SiL	17	62	21	.32	28	18	10	1.58	24.6	21.7
					12-18	SiL	16	59	25	.32						
Lexington	130	Crossett, Ashley	Grasses-weeds, lightly grazed	Upland 4 per cent	0-6	SiL	18	66	16	1.25				1.54	24.2	22.7
					6-12	SiL	17	60	23	.55	27	18	9	1.52	24.6	23.3
					12-18	SiL	18	57	25	.46						
Lintonia	118	Marianna, Lee	Grasses, moderately grazed	Terrace 8 per cent	0-6	SiL	3	79	18	2.87				1.46	28.9	26.5
					6-12	SiL	2	74	24	1.45	32	22	10	1.56	25.6	24.1
					12-18	SiCL	1	71	28	.78						
Loring	115	Forrest City, St. Francis	Hardwood, undisturbed	Upland 2 per cent	0-6	SiL	3	81	16	2.35				1.32	36.5	32.6
					6-12	SiL	2	79	19	.62	26	22	4	1.41	30.9	26.4
					12-18	SiL	1	73	26	.38						
Loring	117	Forrest City, St. Francis	Hardwood, undisturbed	Upland 35 per cent	0-6	SiL	4	74	22	1.33				1.32	36.2	32.0
					6-12	SiL	1	75	24	.46	36	23	13	1.46	30.8	29.3
					12-18	SiL	1	79	20	.25						
Waverly	122	Marvell, Phillips	Hardwood, undisturbed	Bottom level	0-6	SiCL	3	69	28	2.60				1.31	34.2	31.6
					6-12	SiL	1	79	20	.70	28	22	6	1.42	29.1	27.6
					12-18	SiL	1	73	26	.55						
Waverly	123	Marvell, Phillips	Hardwood, undisturbed	Bottom level	0-6	SiL	2	80	18	2.87				1.24	40.4	35.0
					6-12	SiL	4	74	22	1.45	34	23	11	1.31	35.6	32.6
					12-18	L	33	49	18	.95						
Waverly	128	Crossett, Ashley	Hardwood, undisturbed	Bottom level	0-6	SiL	7	67	24	2.75				1.36	30.4	28.4
					6-12	SiL	11	71	18	.70	Non-plastic			1.52	22.4	20.4
					12-18	SiCL	10	58	32	.38						

Table 4. Florida soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	Atmosphere tension
Barth	326	Chattahoochee, Gadsden	Grasses-weeds, hay	Terrace level	0-6	LS	86	10	4	1.25				1.57	21.8	18.0
					6-12	LS	87	9	4	.46	Non-plastic			1.57	20.8	15.6
					12-18	LS	87	9	4	.25						
Congaree	324	Chattahoochee, Gadsden	Hardwood, undisturbed	Bottom level	0-6	CL	36	28	36	2.75	38	19	19	1.29	35.6	32.2
					6-12	CL	33	29	38	1.25				1.54	24.8	23.9
					12-18	C	16	26	58	.78						
Faceville	321	Marianna, Jackson	Grasses, moderately grazed	Upland 5 percent	0-6	SL	80	10	10	.95	Non-plastic			1.54	23.7	17.6
					6-12	SCL	68	10	22	.78				1.51	24.8	20.2
					12-18	SCL	54	14	32	.38						
Faceville	328	Tallahassee, Leon	Pine, undisturbed	Upland 3 percent	0-6	SCL	75	5	20	1.25	Non-plastic			1.50	24.8	21.1
					6-12	SCL	66	4	30	.70				1.45	29.5	27.5
					12-18	SC	46	10	44	.55						
Grady	322	Marianna, Jackson	Pine-oak, undisturbed	Upland level	0-6	SCL	66	14	20	4.34	Non-plastic			1.26	28.8	20.6
					6-12	SCL	69	11	20	.95				1.71	17.4	14.9
					12-18	SCL	67	11	22	.55						
Jonesville	334	Madison, Madison	Grasses-weeds, moderately grazed	Upland 3 percent	0-6	L	41	49	10	2.60	Non-plastic			1.33	32.5	18.8
					6-12	LS	82	8	10	2.87				1.36	30.0	20.7
					12-18	LS	85	7	8	1.98						
Klej	323	Marianna, Jackson	Pine, undisturbed	Upland level	0-6	LS	82	12	6	2.60	Non-plastic			1.33	33.6	20.2
					6-12	LS	85	11	4	1.05				1.64	19.8	13.8
					12-18	LS	85	7	8	.55						
Lakeland	331	Monticello, Jefferson	Grasses, moderately grazed	Upland level	0-6	S	87	11	2	1.55	Non-plastic			1.52	27.2	20.1
					6-12	S	91	5	4	.70				1.61	22.3	13.2
					12-18	S	89	5	6	.38						
Lakeland	333	Madison, Madison	Pine, undisturbed	Upland 12 percent	0-6	SL	49	47	4	1.05	Non-plastic			1.48	26.7	10.4
					6-12	S	89	9	2	.55				1.56	23.7	10.0
					12-18	S	88	8	4	.32						
Leon	332	Monticello, Jefferson	Pine, undisturbed	Upland level	0-6	S	89	9	2	2.60	Non-plastic			1.38	32.5	19.5
					6-12	LS	86	8	6	1.45				1.53	23.4	13.2
					12-18	LS	83	11	6	.95						
Ochlockonee	329	Tallahassee, Leon	Grasses, moderately grazed	Bottom level	0-6	SL	68	16	16	2.75	Non-plastic			1.50	24.9	20.4
					6-12	SCL	67	11	22	1.05				1.45	27.4	21.0
					12-18	SCL	67	11	22	.46						
Plummer	330	Monticello, Jefferson	Hardwood-pine, undisturbed	Upland level	0-6	LS	82	10	8	4.34	Non-plastic			1.38	31.7	20.0
					6-12	S	88	8	4	1.98				1.60	21.4	14.2
					12-18	LS	87	7	6	1.15						
Red Bay	327	Quincy, Gadsden	Grasses-weeds, hay	Upland level	0-6	LS	81	13	6	1.98	Non-plastic			1.50	26.3	18.8
					6-12	SL	76	12	12	.62				1.60	20.5	15.7
					12-18	SL	69	17	14	.46						
Vaucluse	325	Chattahoochee, Gadsden	Pine, undisturbed	Upland 12 percent	0-6	S	90	4	6	.62	Non-plastic			1.56	21.6	12.5
					6-12	LS	82	8	10	.32				1.71	18.4	14.1
					12-18	SL	81	5	14	.25						

Table 5. Georgia soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	Atmosphere tension
Byars	347	Eufaula, Ala. Quitman	Grasses, moderately grazed	Terrace level	0-6	CL	41	29	30	4.52				1.31	36.6	33.1
					6-12	SCL	46	25	29	2.87				1.59	23.2	21.5
					12-18	SCL	53	18	29	1.25	31	19	12			
Goldsboro	335	Valdosta, Lowndes	Grasses-weeds, undisturbed	Upland level	0-6	S	89	7	4	1.15				1.48	24.6	13.8
					6-12	LS	87	7	6	.78				1.62	19.9	13.3
					12-18	LS	85	3	12	.25						
Grady	342	Cordele, Crisp	Pine, undisturbed	Upland level	0-6	SCL	50	24	26	6.04				1.22	44.6	32.2
					6-12	SCL	55	22	23	1.25				1.80	16.3	13.7
					12-18	SCL	50	23	27	.46						
Greenville	344	Americus, Sumter	Pine, Grasses and weeds, undisturbed	Upland 3 per-cent	0-6	SL	70	13	17	1.15				1.56	23.0	14.4
					6-12	SCL	60	14	26	.70	21	12	9	1.72	19.1	16.2
					12-18	SCL	58	14	28	.38						
Henderson	346	Americus, Sumter	Grasses-weeds, undisturbed	Upland 4 per-cent	0-6	SCL	54	23	23	3.41				1.57	23.6	18.7
					6-12	SCL	51	24	25	1.33				1.64	21.0	17.8
					12-18	CL	43	22	35	.70						
Irvington	340	Tifton, Tift	Grasses-weeds, moderately grazed	Upland 5 per-cent	0-6	S	88	10	2	1.50				1.66	21.2	10.9
					6-12	LS	85	10	5	.75	22	13	9	1.80	18.4	12.6
					12-18	SL	77	9	14	.50						
Lynchburg	337	Alapaha, Berrien	Pine, lightly grazed	Upland level	0-6	LS	83	14	3	2.08				1.59	19.9	13.5
					6-12	LS	84	11	5	.70				1.63	19.6	12.2
					12-18	LS	83	14	3	.38						
Lynchburg	338	Alapaha, Berrien	Grasses, moderately grazed	Upland level	0-6	S	94	2	4	1.45				1.55	21.7	13.3
					6-12	S	90	4	6	.62				1.67	18.9	12.4
					12-18	LS	84	10	6	.32						
Lynchburg	343	Cordele, Crisp	Grasses, moderately grazed	Upland level	0-6	SL	71	18	11	1.88				1.60	21.7	15.7
					6-12	SL	68	17	15	.70				1.78	16.9	13.7
					12-18	SCL	62	17	21	.25						
Magnolia	345	Americus, Sumter	Grasses-weeds, undisturbed	Upland 5 per-cent	0-6	LS	85	11	4	.38				1.48	27.2	13.1
					6-12	SL	68	14	18	.38	20	11	9	1.72	18.2	14.8
					12-18	SCL	62	14	24	.38						
Rains	336	Valdosta, Lowndes	Pine, undisturbed	Upland level	0-6	SL	57	29	14	4.05				1.25	32.6	22.4
					6-12	S	94	4	2	.25				1.51	23.3	12.7
					12-18	S	92	4	4	.32						
Tifton	341	Cordele, Crisp	Grasses-weeds, undisturbed	Upland 5 per-cent	0-6	LS	80	16	4	1.05				1.63	22.2	9.0
					6-12	SL	72	13	15	.55	15	12	3	1.72	17.9	10.4
					12-18	SCL	63	12	25	.46						

Table 6. Louisiana soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	Atmosphere tension
Bowie	139	Pollock, Grant	Pine, undisturbed	Upland 4 per-cent	0-6	L	46	44	10	1.88				1.46	25.8	20.7
					6-12	L	36	42	22	.78	24	15	9	1.51	26.2	21.0
					12-18	L	37	43	20	.38						
Caddo	142	Glenmora, Rapides	Grasses, moderately grazed	Upland level	0-6	SiL	15	74	11	3.27				1.38	32.3	29.6
					6-12	SiL	7	74	19	1.05			Non-plastic	1.48	29.9	26.0
Calhoun	145	Covington, St. Tammany	Grasses-weeds, lightly grazed	Terrace level	0-6	SiL	32	58	10	2.23				1.40	29.8	28.1
					6-12	SiL	32	56	12	.70			Non-plastic	1.54	24.2	22.3
					12-18	SiL	30	52	18	.55						
Ochlockonee	138	Pollock, Grant	Hardwood, undisturbed	Bottom level	0-6	SiL	31	50	19	2.87				1.11	45.1	36.0
					6-12	SiL	34	51	15	1.65			Non-plastic	1.18	43.6	34.9
					12-18	L	44	42	14	.95						
Olivier	143	Livingston, Livingston	Pine, undisturbed	Terrace level	0-6	SiL	15	71	14	2.47				1.35	33.2	29.4
					6-12	SiL	11	73	16	.55	27	21	6	1.54	27.6	24.2
					12-18	SiCL	8	56	36	.46						
Olivier	144	Livingston, Livingston	Grasses-weeds, lightly grazed	Terrace level	0-6	SiL	27	61	12	2.60				1.37	30.0	28.2
					6-12	SiL	21	63	16	.70	26	20	6	1.65	21.9	20.2
					12-18	SiL	16	62	22	.38						
Orangeburg	134	Calhoun Exp. Station, Ouachita	Grasses, moderately grazed	Upland 2 per-cent	0-6	SL	53	31	16	1.55				1.74	17.4	15.1
					6-12	L	46	36	18	.78	18	12	6	1.78	16.2	15.3
					12-18	L	40	36	24	.25						
Richland	146	Covington, St. Tammany	Pine, undisturbed	Terrace level	0-6	SiL	28	60	12	1.65				1.32	34.4	30.1
					6-12	SiL	26	54	20	.95			Non-plastic	1.60	22.6	21.0
					12-18	SiL	28	52	20	.70						
Ruston	136	Calhoun Exp. Station, Ouachita	Pine, undisturbed	Upland 6 per-cent	0-6	SL	69	23	8	.78				1.64	18.3	13.8
					6-12	SL	60	24	16	.38			Non-plastic	1.74	16.3	13.4
					12-18	SCL	54	19	27	.46						
Ruston	137	Pollock, Grant	Pine, undisturbed	Upland 6 per-cent	0-6	SL	64	26	10	1.05				1.56	20.4	15.7
					6-12	SCL	48	26	26	.70	24	14	10	1.58	22.8	18.5
					12-18	L	46	30	24	.38						
Savannah	141	Glenmora, Rapides	Grasses, moderately grazed	Upland 6 per-cent	0-6	SiL	39	51	10	2.81				1.38	30.2	26.2
					6-12	L	32	48	20	.62	28	18	10	1.59	23.0	21.2
Thompson	135	Calhoun Exp. Station, Ouachita	Grasses-weeds, hay	Terrace 4 per-cent	0-6	SL	55	35	10	1.25				1.59	20.9	17.3
					6-12	SL	62	29	9	1.05			Non-plastic	1.68	19.7	15.8
					12-18	SL	66	25	9	.55						
Vian	131	Bastrop, Morehouse	Hardwood-pine, undisturbed	Terrace 4 per-cent	0-6	LS	80	18	2	.78				1.50	24.8	14.2
					6-12	SL	64	23	13	.46			Non-plastic	1.60	21.4	15.8
Vian	132	Bastrop, Morehouse	Grasses-weeds, undisturbed	Terrace level	0-6	SiL	31	53	16	1.65				1.54	23.5	21.2
					6-12	SiL	29	50	21	1.15	22	16	6	1.63	21.1	19.0
					12-18	SiL	24	54	22	.78						
Wrightsville	133	Bastrop, Morehouse	Hardwood-grasses, undisturbed	Terrace level	0-6	L	41	45	13	1.33				1.61	21.1	19.1
					6-12	L	40	46	14	.70			Non-plastic	1.68	19.3	17.8
					12-18	L	39	47	14	.38						
Yahola	140	Alexandria, Rapides	Grasses-weeds, hay	Bottom level	0-6	SiL	29	59	12	2.08				1.44	28.6	27.0
					6-12	SiL	29	57	14	.55			Non-plastic	1.51	29.8	25.9
					12-18	SiL	25	61	14	.32						

Table 7. Mississippi soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liq. limit	Plas. limit	Plasticity index		Saturation	Atmosphere
Alligator	109	Clarksdale, Coahoma	Grasses, lawn	Bottom level	0-6 6-12 12-18	C C C	13 4 4	21 22 25	66 74 71	4.15 1.15 .86	76	30	46	1.10 1.22	57.0 50.2	53.1 48.4
Brooksville	219	Brooksville Exp. Station, Noxubee	Grasses, cultivated previously, now lightly grazed	Upland level	0-6 6-12 12-18	SiCL SiC SiCL	15 11 18	51 48 48	34 41 34	1.98 1.25 .86	51	23	28	1.50 1.57	30.2 29.8	27.4 28.2
Calhoun	205	Oakley Exp. Station, Hinds	Hardwood, lightly grazed	Terrace 2 percent	0-6 6-12 12-18	SiL SiL SiL	1 1 4	82 84 78	17 15 18	3.13 .95 .70	Non-plastic			1.34 1.38	33.2 36.4	29.8 30.3
Calloway	209	Oakley Exp. Station, Hinds	Hardwood, undisturbed	Upland level	0-6 6-12 12-18	SiL SiL SiCL	5 7 6	77 81 60	18 12 34	1.25 .46 .38	29	22	7	1.31 1.27	36.1 41.9	32.2 34.0
Calloway	246	Holly Springs, Marshall	Grasses, lawn	Upland level	0-6 6-12	SiL SiL	15 9	68 65	17 26	.86 .55	34	24	10	1.50 1.41	*28.2 *33.2	25.4 29.4
Calloway	248	Holly Springs, Marshall	Grasses, moderately grazed	Upland 3 percent	0-6 6-12 12-18	SiL SiCL SiCL	6 2 2	72 70 70	22 28 28	1.25 .46 .38	35	24	11	1.47 1.46	29.1 30.0	25.9 28.0
Carroll	252	Sardis Dam, Panola	Hardwood, undisturbed	Terrace level	0-6 6-12	SiL SiL	13 11	74 62	13 27	1.65 .55	34	19	15	1.34 1.38	*36.2 *34.6	28.5 27.4
Collins	251	Sardis Dam, Panola	Grasses, hay	Bottom level	0-6 6-12 12-18	SiL SiL SiCL	2 3 1	84 83 71	14 14 28	1.25 1.77 .32	Non-plastic			1.29 1.34	38.8 38.3	32.7 30.7
Collins	253	Batesville, Panola	Grasses, moderately grazed	Bottom 3 percent	0-6 6-12 12-18	SiL SiL SiL	2 2 2	82 83 83	16 15 15	1.65 .46 .38	29	24	5	1.48 1.51	29.2 28.4	26.4 25.7
Commerce	102	Rolling Fork, Sharkey	Grasses, lawn	Terrace level	0-6 6-12 12-18	SiL SiL SiL	35 23 22	59 61 66	6 16 12	1.55 .62 .32	29	25	4	1.31 1.53	36.4 30.0	30.0 26.2
Commerce	103	Rolling Fork, Sharkey	Grasses, hay	Terrace level	0-6 6-12 12-18	L SiL SiL	25 26 31	49 54 53	26 20 16	1.15 .38 .32	32	23	9	1.30 1.48	*38.5 *29.9	29.0 27.1
Dowling	259	Lambert, Quitman	Cypress-gum, undisturbed	Bottom level	0-6 6-12 12-18	C C C	2 2 1	25 24 24	73 74 75	6.17 5.10 2.23	91	42	49	.86 .95	79.7 71.5	62.4 68.6
Dubbs	111	Clarksdale, Coahoma	Grasses, hay	Terrace level	0-6 6-12 12-18	CL CL CL	21 28 23	45 43 47	34 29 30	4.80 2.23 1.33	34	19	15	1.45 1.64	29.2 24.0	26.3 22.8
Dubbs	112	Tunica, Tunica	Grasses, lightly grazed	Terrace level	0-6 6-12 12-18	CL L L	28 37 42	44 39 36	28 24 22	3.69 1.45 1.05	37	21	16	1.51 1.51	26.5 27.9	24.9 26.4
Dundee	101	Rolling Fork, Sharkey	Grasses, hay	Terrace level	0-6 6-12 12-18	SiCL SiCL SiCL	15 10 5	57 56 57	28 34 38	1.88 .95 .46	38	22	16	1.50 1.56	31.2 27.6	27.0 26.2
Dundee	104	Rolling Fork, Sharkey	Grasses, hay	Terrace level	0-6 6-12 12-18	SiC SiCL SiL	9 13 24	47 59 52	44 28 24	4.52 3.96 .55	52	23	29	1.37 1.49	35.6 30.8	28.0 29.5
Dundee	257	Lambert, Quitman	Pecan-grasses, hay	Terrace level	0-6 6-12 12-18	SiCL SiCL SiCL	11 10 13	55 52 53	34 38 34	2.47 1.45 .70	46	24	22	1.39 1.50	32.8 30.0	27.3 28.2
Dundee	261	Vance, Quitman	Pecan-grasses, lightly grazed	Terrace level	0-6 6-12 12-18	SiCL SiCL SCL	21 19 58	52 45 18	27 36 24	3.27 .86 .61	42	22	20	1.54 1.53	26.0 30.4	34.2 28.6
Ecu	229	Pontotoc Exp. Station, Pontotoc	Pine, undisturbed	Upland percent	0-6 6-12 12-18	SiC SiL SiCL	11 14 11	47 60 55	42 26 34	1.45 .86 .86	30	17	13	1.50 1.58	25.6 23.2	21.6 21.6
Eutaw	212	Forrest, Scott	Pine-hardwood, undisturbed	Upland level	0-6 6-12 12-18	L L CL	43 32 24	45 46 40	12 22 36	1.25 .32 .32	25	13	12	1.64 1.74	20.4 18.4	18.4 17.4

* Moisture content at theoretical maximum determined from computed total pore space. Saturation value was not determined for this depth.

(Continued)

Table 7. Mississippi soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	Atmosphere tension
Eutaw	213	Forest, Scott	Grasses-weeds, hay	Upland level	0-6	SiCL	16	56	28	2.08				1.52	26.0	24.5
					6-12	SiCL	14	54	32	.62	40	18	22	1.52	25.6	24.6
					12-18	SiCL	15	47	38	.32						
Eutaw	224	Dancy, Webster	Hardwood, undisturbed	Upland 2 percent	0-6	SiL	21	57	22	3.86				1.07	*55.0	41.2
					6-12	SiCL	14	51	35	1.05	45	25	20	1.40	*33.7	30.4
					12-18	SiCL	14	51	35							
Eutaw	225	Dancy, Webster	Pine-grasses, undisturbed	Upland 3 percent	0-6	SiCL	10	62	28	1.45				1.41	31.6	29.1
					6-12	SiCL	13	57	30	.55	45	22	23	1.47	32.4	31.0
					12-18	SiCL	10	54	36	.46						
Falaya	201	Utica, Hinds	Grasses, moderately grazed	Bottom level	0-6	Si	10	80	10	1.25				1.34	33.8	31.0
					6-12	Si	7	83	10	.55	Non-plastic			1.37	33.4	29.4
					12-18	Si	9	85	8	.38						
Falaya	204	Utica, Hinds	Grasses-weeds, moderately grazed	Bottom level	0-6	Si	3	86	11	1.25				1.34	35.4	31.4
					6-12	SiL	1	85	14	.86	Non-plastic			1.40	34.8	30.0
					12-18	SiL	1	81	18	.86						
Falaya-Collins	228	Pontotoc Exp. Station, Pontotoc	Hardwood, undisturbed	Bottom level	0-6	SiL	17	61	22	3.27				1.46	32.6	25.2
					6-12	CL	26	44	30	.55	38	21	17	1.51	27.1	24.0
					12-18	SiL	24	50	26	.38						
Falaya-Collins	232	Booneville, Prentiss	Grasses, moderately grazed	Bottom level	0-6	SiL	17	65	18	2.29				1.42	*31.9	28.6
					6-12	L	38	49	13	1.20	30	19	11	1.57	*26.0	23.8
					12-18	L	38	49	13							
Falkner	227	Pontotoc Exp. Station, Pontotoc	Grasses, lawn	Upland level	0-6	SiL	30	58	12	2.60				1.53	23.6	19.8
					6-12	SiL	18	62	20	.55	21	17	4	1.63	22.0	19.3
					12-18	SiL	25	61	14	.55						
Forestdale	258	Lambert, Quitman	Grasses, lawn	Terrace level	0-6	SiCL	20	53	27	1.45				1.47	28.1	25.3
					6-12	SiC	13	46	41	.62	43	25	18	1.53	32.4	29.3
					12-18	CL	24	39	37	.55						
Franklinton	230	Booneville, Prentiss	Grasses-weeds, undisturbed	Upland level	0-6	SiL	26	59	15	2.08				1.36	*35.1	26.6
					6-12	SiL	22	52	26	.62	32	20	12	1.45	*31.2	26.3
					12-18	SiL	22	52	26							
Geiger	226	Dancy, Webster	Grasses-weeds, undisturbed	Terrace level	0-6	SiCL	5	58	37	1.05				1.39	33.0	31.4
					6-12	SiCL	6	56	38	.55	46	26	20	1.39	35.3	34.0
					12-18	SiL	22	62	16	.55						
Grenada	207	Oakley Exp. Station, Hinds	Grasses, hay	Upland 5 percent	0-6	SiL	6	82	12	2.08				1.40	31.5	28.5
					6-12	SiL	2	74	24	.38	34	22	12	1.46	30.1	26.8
					12-18	SiL	5	73	22	.18						
Grenada	247	Holly Springs, Marshall	Grasses, moderately grazed	Upland level	0-6	SiL	3	83	14	1.77				1.48	29.2	27.0
					6-12	SiCL	2	65	33	.50	34	23	11	1.48	29.0	27.1
					12-18	SiCL	1	67	32	.38						
Grenada	249	Holly Springs, Marshall	Grasses, moderately grazed	Upland 6 percent	0-6	SiCL	4	62	34	3.41				1.48	29.1	26.9
					6-12	SiCL	1	71	28	.70	34	23	11	1.48	29.4	27.7
					12-18	SiCL	2	70	28	.38						
Henry	208	Oakley Exp. Station, Hinds	Grasses, hay	Upland level	0-6	SiC	3	56	41	1.77				1.46	28.7	26.5
					6-12	SiC	6	54	40	.62	34	20	14	1.44	30.2	27.6
					12-18	SiC	1	55	44	.38						
Hunt	221	Brooksville Exp. Station, Noxubee	Grasses, moderately grazed	Upland 4 percent	0-6	SiL	19	59	22	3.96				1.57	28.0	26.4
					6-12	SiL	19	57	24	1.88	50	22	28	1.55	30.4	28.4
					12-18	SiCL	10	50	40	1.77						
Hymon	256	Batesville, Panola	Hardwood-grasses, lightly grazed	Bottom level	0-6	SiL	3	80	17	1.45				1.46	29.0	24.8
					6-12	SiL	8	73	19	.55	Non-plastic			1.48	30.9	26.0
					12-18	SiL	27	60	13	.38						
Kaufman	222	State College, Oktibbeha	Clover-grasses, cultivated previously, now lightly grazed	Bottom 3 percent	0-6	L	32	46	22	2.75				1.51	26.8	21.4
					6-12	L	34	44	22	1.98	29	17	12	1.64	22.0	20.1
					12-18	L	31	45	24	1.55						
Leeper	223	State College, Oktibbeha	Grasses, cultivated previously, now in hay	Terrace 3 percent	0-6	CL	31	35	34	2.35				1.38	33.9	31.8
					6-12	CL	27	35	38	.86	50	21	29	1.57	25.8	24.9
					12-18	CL	23	37	40	.70						

* Moisture content at theoretical maximum determined from computed total pore space. Saturation value was not determined for this depth.

(Continued)

Table 7. Mississippi soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liq-uid limit	Plas-tic limit	Plas-tic index		Saturation	At-mosphere tension
Lexington	234	Corinth, Alcorn	Pine-hardwood, undisturbed	Upland 4 per-cent	0-6	SiL	30	56	14	1.88	26	18	8	1.33	32.8	25.3
					6-12	SiL	20	68	12	.62				1.45	29.3	24.3
					12-18	SiCL	18	52	30	.55						
Loring	202	Utica, Hinds	Pine-oak, undisturbed	Upland 5 per-cent	0-6	SiL	3	83	14	1.25	Non-plastic			1.26	37.1	30.6
					6-12	SiL	2	82	16	.78				1.33	37.0	31.2
					12-18	SiL	3	75	22	.55						
Loring	203	Utica, Hinds	Oak-pine, lightly grazed	Upland 5 per-cent	0-6	SiL	2	80	18	2.08	32	21	11	1.27	38.7	32.9
					6-12	SiL	1	75	24	.86				1.39	32.4	27.6
					12-18	SiCL	1	65	34	.55						
Loring	250	Sardis Dam, Panola	Hardwood, undisturbed	Upland 3 per-cent	0-6	SiL	4	76	20	1.50	Non-plastic			1.36	32.2	28.0
					6-12	SiCL	1	63	36	.50				1.39	31.0	27.3
					12-18	SiCL	1	65	34	.45						
Mantachie	215	Newton Exp. Station, Newton	Grasses, hay	Bottom level	0-6	SL	69	21	10	1.65	Non-plastic			1.55	22.2	19.2
					6-12	SL	74	20	6	.32				1.53	24.2	19.3
					12-18	SL	74	16	10	.18						
Memphis	254	Batesville, Panola	Grasses, moderately grazed	Upland 5 per-cent	0-6	SiL	3	73	24	1.33	42	24	18	1.52	27.4	23.9
					6-12	SiCL	2	68	30	.38				1.46	32.6	28.1
					12-18	SiL	3	73	24	.35						
Oktibbeha	210	Forest, Scott	Pine, undisturbed	Upland 5 per-cent	0-6	CL	23	41	36	2.08	59	20	39	1.48	29.0	24.4
					6-12	C	16	36	48	.70				1.49	28.0	25.7
					12-18	C	13	35	52	.46						
Olivier	206	Oakley Exp. Station, Hinds	Grasses, moderately grazed	Terrace 2 per-cent	0-6	SiL	4	78	18	1.65	34	23	11	1.46	27.4	25.2
					6-12	SiL	3	73	24	.07				1.46	29.9	26.9
					12-18	SiCL	1	67	32	.18						
Olivier	235	Corinth, Alcorn	Grasses, hay	Terrace level	0-6	SiL	22	62	16	2.23	29	19	10	1.46	30.0	27.4
					6-12	SiL	32	52	16	.46				1.61	24.3	22.4
					12-18	SiL	12	64	24	.32						
Olivier	255	Batesville, Panola	Grasses, moderately grazed	Terrace level	0-6	SiL	14	71	15	1.05	34	23	11	1.43	*31.5	27.2
					6-12	SiL	14	64	22	.55				1.44	*31.7	27.4
Prentiss	214	Newton Exp. Station, Newton	Grasses, hay	Terrace 2 per-cent	0-6	SiL	33	53	14	1.05	33	20	13	1.59	22.4	19.3
					6-12	SiL	18	56	26	.32				1.58	24.8	22.0
					12-18	SiL	12	70	18	.07						
Sawyer	149	Poplarville Exp. Station, Pearl River	Grasses, hay	Upland 6 per-cent	0-6	SL	53	39	8	1.05	Non-plastic			1.50	25.3	20.2
					6-12	SiL	27	59	14	.55				1.75	18.0	16.1
					12-18	SiL	23	57	20	.32						
Savannah	147	Poplarville Exp. Station, Pearl River	Grasses, lawn	Upland level	0-6	L	45	47	8	2.87	25	17	8	1.48	25.4	21.8
					6-12	L	37	43	20	1.33				1.56	24.4	21.0
					12-18	L	34	42	24	.70						
Sharkey	106	Stoneville Exp. Station, Washington	Hardwood, undisturbed	Bottom level	0-6	C	2	21	77	3.62	82	32	50	1.02	63.6	54.7
					6-12	C	3	23	74	1.45				1.14	57.7	55.7
					12-18	C	2	17	81	1.65						
Sharkey	107	Stoneville Exp. Station, Washington	Hardwood, undisturbed	Bottom level	0-6	C	3	25	72	3.00	81	32	49	1.00	66.0	57.6
					6-12	C	3	23	74	1.33				1.11	56.6	55.2
					12-18	C	2	22	76	1.33						
Sharkey	108	Stoneville Exp. Station, Washington	Hardwood, undisturbed	Bottom level	0-6	C	6	32	62	3.77	74	28	46	1.21	46.6	43.1
					6-12	C	6	26	68	1.33				1.22	48.5	47.2
					12-18	C	6	22	72	.95						
Sharkey	110	Clarksville, Coahoma	Grasses, moderately grazed	Bottom level	0-6	C	4	28	68	2.47	72	28	44	1.36	40.1	38.3
					6-12	C	1	32	67	.78				1.24	49.1	46.5
					12-18	C	1	22	77	.86						
Sharkey	113	Tunica, Tunica	Grasses-weeds, undisturbed	Bottom level	0-6	SiC	3	47	50	3.96	57	25	32	1.39	32.2	30.8
					6-12	SiC	3	45	52	1.88				1.41	32.2	31.5
					12-18	SiCL	1	65	34	1.25						
Sharkey	260	Lambert, Quitman	Grasses, moderately grazed	Bottom level	0-6	C	1	37	62	1.25	82	28	54	1.36	36.5	34.8
					6-12	C	1	34	65	1.15				1.34	43.0	40.1
					12-18	C	1	35	64	.95						
Shubuta	218	Newton Exp. Station, Newton	Pine-oak, undisturbed	Upland 10 per-cent	0-6	SL	71	25	4	.86	22	18	4	1.40	34.2	25.5
					6-12	SL	65	21	14	.55				1.50	26.9	21.2
					12-18	SC	46	16	38	.55						

* Moisture content at theoretical maximum determined from computed total pore space. Saturation value was not determined for this depth.

(Continued)

Table 7. Mississippi soil series: site descriptions and soil properties (continued)

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liquid limit	Plastic limit	Plasticity index		Saturation	Atmosphere tension
Shubuta	231	Booneville, Prentiss	Hardwood, undisturbed	Upland 8 percent	0-6	CL	31	41	28	1.88				1.34	33.6	29.2
					6-12	C	35	17	48	1.25	55	28	27	1.30	45.3	41.9
					12-18	SCL	50	24	26	.55						
Susquehanna	148	Poplarville Exp. Station, Pearl River	Grasses, hay	Upland 3 percent	0-6	SL	56	34	10	1.88				1.54	24.6	20.6
					6-12	SCL	56	14	30	.78	34	20	14	1.63	22.8	21.0
					12-18	CL	35	31	34	.55						
Susquehanna	217	Newton Exp. Station, Newton	Grasses, moderately grazed	Upland 5 percent	0-6	SiL	22	64	14	1.65				1.50	25.4	22.6
					6-12	SiL	14	60	26	.55	34	20	14	1.51	28.6	25.2
					12-18	SiCL	12	54	34	.25						
Tilden	216	Newton Exp. Station, Newton	Grasses, hay	Terrace 8 percent	0-6	SiL	37	51	12	.70				1.56	23.4	20.4
					6-12	SiL	22	52	26	.55	53	18	35	1.56	24.7	22.4
					12-18	SiL	26	50	24	.18						
Tunica	114	Tunica, Tunica	Grasses-weeds, undisturbed	Bottom 3 percent	0-6	C	5	29	66	1.55				1.34	37.0	35.9
					6-12	C	8	28	64	.95	57	24	33	1.38	35.0	34.0
					12-18	C	9	33	58	.55						
Vaiden	211	Forest, Scott	Pine, undisturbed	Upland level	0-6	SiC	8	52	40	2.47				1.22	*43.5	34.8
					6-12	C	7	38	55	1.05	53	23	30	1.28	*40.4	38.9
Vaiden	220	Brooksville Exp. Station, Noxubee	Grasses, moderately grazed	Upland 6 percent	0-6	SiC	11	48	41	1.25				1.46	33.0	31.5
					6-12	SiC	9	45	46	.62	53	21	32	1.52	32.6	30.2
					12-18	SiCL	11	55	34	.62						
Waverly	233	Corinth, Alcorn	Grasses-weeds, hay	Bottom level	0-6	SiCL	7	63	30	1.88				1.45	30.1	27.8
					6-12	SiL	8	70	22	1.05	29	21	8	1.52	27.7	26.1
					12-18	SiCL	15	51	34	.86						

* Moisture content at theoretical maximum determined from computing total pore space. Saturation value was not determined for this depth.

Table 8. Tennessee soil series: site descriptions and soil properties

Soil series	Site number	Weather station and county	Vegetation and land use	Topographic position and slope	Depths sampled inches	Texture class	Mechanical analysis by weight, percent			Organic matter by weight percent	Plasticity constants by weight percent			Bulk density grams per cc.	Soil moisture by weight, percent	
							Sand	Silt	Clay		Liq- uid	Plas- tic	Plas- ticity index		Satu- ration	At- mosphere tension
Carroll	241	Jackson, Madison	Legumes-grasses, cultivated previously, now in hay	Terrace 3 per-cent	0-6	SiL	14	72	14	0.86				1.51	25.7	22.6
					6-12	SiL	3	71	26	.18	30	21	9	1.60	25.4	23.4
					12-18	SiCL	1	69	30	.25						
Grenada	242	Brownsville, Haywood	Grasses-weeds, undisturbed	Upland 6 per-cent	0-6	SiL	2	80	18	2.23				1.36	34.4	30.2
					6-12	SiCL	2	68	30	.38	33	22	11	1.48	29.4	26.3
					12-18	SiCL	1	71	28	.32						
Independence	239	Jackson, Madison	Grasses, moderately grazed	Terrace 20 per-cent	0-6	SL	60	34	6	1.88				1.49	26.8	17.6
					6-12	SL	68	26	6	.70	Non-plastic			1.63	21.5	13.2
					12-18	SL	75	19	6	.62						
Lexington	237	Selmer, McNairy	Hardwood, undisturbed	Upland 3 per-cent	0-6	SiL	17	65	18	1.98				1.34	32.5	26.0
					6-12	SiL	13	63	24	.86	28	19	9	1.50	28.2	23.8
					12-18	SiCL	11	57	32	.38						
Lintonia	240	Jackson, Madison	Legumes-grasses, cultivated previously, now in hay	Terrace 3 per-cent	0-6	SiL	31	55	14	1.05				1.64	21.9	18.8
					6-12	SiCL	13	55	32	.38	29	17	12	1.72	19.3	17.0
					12-18	SiCL	8	60	32	.46						
Memphis	244	Moscow, Fayette	Hardwood, undisturbed	Upland 6 per-cent	0-6	SiL	4	77	19	1.45				1.38	32.1	27.6
					6-12	SiCL	2	66	32	.55	34	21	13	1.37	35.0	28.1
					12-18	SiCL	1	65	34	.38						
Olivier	236	Selmer, McNairy	Grasses, moderately grazed	Terrace level	0-6	SiL	25	65	10	.62				1.50	27.8	25.5
					6-12	SiL	27	57	16	.78	27	19	8	1.57	25.6	23.5
					12-18	SiL	26	52	22	.38						
Waverly	238	Jackson, Madison	Grasses, moderately grazed	Bottom level	0-6	SiL	12	64	24	1.88				1.34	35.6	30.1
					6-12	SiCL	16	56	28	.78	34	22	12	1.44	31.3	28.0
					12-18	CL	24	48	28	.55						
Waverly	243	Brownsville, Haywood	Grasses-weeds, undisturbed	Bottom level	0-6	SiL	4	82	14	1.33				1.44	31.0	28.0
					6-12	SiL	3	77	20	.78	28	23	5	1.49	30.2	26.4
					12-18	SiCL	3	66	31	.55						
Waverly	245	Moscow, Fayette	Grasses, hay	Bottom level	0-6	SiL	2	80	18	1.65				1.27	39.9	35.6
					6-12	SiL	1	83	16	.55	29	25	4	1.47	30.2	27.8
					12-18	SiL	2	82	16	.55						

